



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/654,821	09/04/2003	George H. Forman	200309653-1	5191
22879	7590	11/12/2009		
HEWLETT-PACKARD COMPANY Intellectual Property Administration 3404 E. Harmony Road Mail Stop 35 FORT COLLINS, CO 80528			EXAMINER STACE, BRENT S	
			ART UNIT 2161	PAPER NUMBER
			NOTIFICATION DATE 11/12/2009	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

JERRY.SHORMA@HP.COM
ipa.mail@hp.com
laura.m.clark@hp.com



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/654,821
Filing Date: September 04, 2003
Appellant(s): FORMAN, GEORGE H.

Dan C. Hu
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 9/23/2009 appealing from the Office action mailed 9/28/2006.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,094,643	Anderson et al.	07-2000
5,937,406	Balabine et al.	08-1999
5,421,008	Banning	05-1995

5,404,507

Bohm et al.

04-1995

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 17, 18, 31, and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,094,643 (Anderson et al.).

Claim 17 can be mapped to Anderson as follows: “A data storage and data mining process for determining at least one probable point-of-compromise for members of a data set, [Anderson, col. 5, lines 24-38] the process comprising:

- in a set of data files, [Anderson, col. 7, lines 2-14] logging every individual transaction between first members and second members, [Anderson, col. 6, lines 2-6 with Anderson, col. 9, lines 54-65] wherein said first members are subject to compromise [Anderson, col. 6, lines 2-6] and said second members are each a potential point-of-compromise; [Anderson, col. 6, lines 2-6 with Anderson, col. 9, lines 53-65]
- for a given set of compromised first members, [Anderson, col. 8, lines 45-60] segregating a subset of the data files for a predetermined past time period

Art Unit: 2161

wherein said subset has at least one of said first members logged therein;

[Anderson, col. 8, lines 45-60 with Anderson, col. 9, lines 54-65]

- for each of said second members in said subset, incrementing a corresponding second member tally in response to each said individual transaction associated with each one of said compromised first members, and creating a set of the second member tallies that are associated with respective second members;

[Anderson, cols. 7-8, lines 49-38 with Anderson, col. 8, lines 45-60 with Anderson, col. 9, lines 13-27 with Anderson, col. 9, lines 55-65] and

- organizing said set of second member tallies according to a predetermined scoring statistic associated with probability of point-of-compromise” [Anderson, col. 8, lines 40-60 with Anderson, col. 9, lines 54-65].

Claim 18 encompasses substantially the same scope of the invention as that of Claim 17, in addition to a system and some means for performing the method/process steps of Claim 17. Therefore, Claim 18 is rejected for the same reasons as stated above with respect to Claim 17. Additionally, Claim 18 recites the following means also mapped to Anderson: “...means for storing data files” [Anderson, col. 7, lines 2-14].

Claim 31 can be mapped to Anderson as follows: “The data storage and mining process of claim 17, wherein incrementing each second number tally comprises incrementing a corresponding count of a number of occurrences of transactions involving the compromised first members at the corresponding second member” [Anderson, cols. 7-8, lines 49-38 with Anderson, col. 9, lines 54-65].

Claim 32 can be mapped to Anderson as follows: “The data storage and data mining process of claim 18, wherein each second member tally comprises a count of a number of occurrences of transactions involving the third members at the corresponding second member” [Anderson, cols. 7-8, lines 49-38 with Anderson, col. 9, lines 54-65].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 9-11, 13, 15, 16, 19, 20, 21, 25, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,094,643 (Anderson et al.).

Claim 1 can be mapped to Anderson as follows: “A method for predicting potential points-of-compromise, [Anderson, col. 5, lines 24-38] the method comprising:

- correlating each first member of a first set, wherein each of said first members may be compromised, [Anderson, col. 6, lines 2-6] with each second member of a second set, wherein each of said second members may be a potential point-of compromise; [Anderson, col. 6, lines 2-6 with Anderson, col. 9, lines 53-65]
- for a given third set of third members, wherein each of said third members is a given compromised first member from said database, [Anderson, col. 8, lines 45-

Art Unit: 2161

60] selecting interactions associating said third members and said second members; [Anderson, col. 8, lines 45-60 with Anderson, col. 9, lines 53-65]

- calculating interaction factors for respective second members that are part of interactions involving the third members, [Anderson, col. 8, lines 45-60 with Anderson, col. 9, lines 53-65] each interaction factor indicating a number of occurrences of interactions involving said third members at a corresponding second member; [Anderson, cols. 7-8, lines 49-38 with Anderson, col. 9, lines 54-65] and
- predicting at least one potential point-of-compromise from results of said calculating” [Anderson, col. 6, lines 1-30 with Anderson, col. 9, lines 54-65].

Anderson discloses the above limitations but does not explicitly teach:

- “storing a database
- recording in said database each interaction of a first member with a second member.”

With respect to Claim 1, Anderson, teaches:

- “storing a database [Anderson, col. 7, lines 7-15 with Anderson, col. 8, lines 35-38 with Anderson, cols. 9-10, lines 54-5]
- recording in said database each interaction of a first member with a second member” [Anderson, col. 7, lines 7-15 with Anderson, col. 8, lines 35-38 with Anderson, cols. 9-10, lines 54-5].

Anderson discloses gathering data from FI's as files with fields and storing that data for further processing comprising databases, however Anderson does not explicitly disclose that the further processing is scoring the cards/tractions or events.

It would have been obvious to one of ordinary skill in the art at the time of invention to take the storage features from Anderson and install it into the invention of Anderson, thereby offering the obvious advantage of being able to quickly recall previously computed data (such as history data) of Anderson instead of re-computing data when it is desired.

Claim 2 can be mapped to Anderson as follows: "The method as set forth in claim 1 said selecting further comprising:

- for each of said third members, including each said interaction found for a predetermined past time period" [Anderson, col. 8, lines 45-60].

Claim 3 can be mapped to Anderson as follows: "The method as set forth in claim 2 wherein each said predetermined past time period is determined individually from a given time-of-first-known-fraud for each of said third members" [Anderson, col. 5, lines 22-27 with Anderson, col. 5, lines 47-52].

Claim 9 can be mapped to Anderson as follows: "The method as set forth in claim 1, said predicting further comprising:

- listing all second members associated in said selecting as a potential point-of-compromise with a score based upon the interaction factors" [Anderson, cols. 7-

8, lines 49-38 with Anderson, col. 8, lines 45-60 with Anderson, col. 9, lines 13-27 with Anderson, col. 9, lines 55-65].

Claim 10 can be mapped to Anderson as follows: “The method as set forth in claim 9, said predicting further comprising:

- adjusting each said score by a common factor associated with each said second member to normalize the scores” [Anderson, col. 7, lines 2-14].

Claim 11 can be mapped to Anderson as follows: “A method for identifying possible points-of-compromise, [Anderson, col. 5, lines 24-38] the method comprising:

- correlating a plurality of at least first items and second items, each second item representing a potential point-of-compromise; [Anderson, col. 6, lines 2-6 with Anderson, col. 9, lines 53-65]
- for a given subset of the first items, extracting from said matrix all interactivities of the first items in said subset with second items; [Anderson, col. 8, lines 45-60 with Anderson, col. 9, lines 53-65]
- tabulating extracted said interactivities according to frequency of said interactivities; [Anderson, col. 9, lines 12-15 with Anderson, cols. 7-8, lines 49-38 with Anderson, col. 8, lines 45-60 with Anderson, col. 9, lines 13-27 with Anderson, col. 9, lines 55-65] and
- assigning a point-of-compromise score to each of said second items that are involved in the extracted interactivities, wherein each said score is indicative of frequency of the extracted interactivities occurring at the corresponding second item” [Anderson, col. 6, lines 1-30 with Anderson, col. 5, lines 16-21 with

Art Unit: 2161

Anderson, cols. 7-8, lines 49-38 with Anderson, col. 8, lines 45-60 with Anderson, col. 9, lines 13-27 with Anderson, col. 9, lines 54-65].

Anderson discloses the above limitations but does not explicitly teach:

- “creating a matrix
- logging in said matrix every interactivity involving pairs of said first and second items.”

With respect to Claim 11, Anderson, teaches:

- “creating a matrix” [Anderson, col. 7, lines 7-15 with Anderson, col. 8, lines 35-38 with Anderson, cols. 9-10, lines 54-5]
- logging in said matrix every interactivity involving pairs of said first and second items.” [Anderson, col. 7, lines 7-15 with Anderson, col. 8, lines 35-38 with Anderson, cols. 9-10, lines 54-5].

Anderson discloses gathering data from FI's as files with fields and storing that data for further processing comprising databases (a matrix), however Anderson does not explicitly disclose that the further processing is scoring the cards/tractions or events.

It would have been obvious to one of ordinary skill in the art at the time of invention to take the storage features from Anderson and install it into the invention of Anderson, thereby offering the obvious advantage of being able to quickly recall previously computed data (such as history data) of Anderson instead of re-computing data when it is desired.

Claim 13 can be mapped to Anderson as follows: “The method as set forth in claim 11 further comprising:

Art Unit: 2161

- limiting said extracting to a predetermined past time frame” [Anderson, col. 8, lines 45-60].

Claim 15 can be mapped to Anderson as follows: “The method as set forth in claim 11 wherein each said extracted interactivity is a data pair further comprising a first identifier representative of a compromised first item and an interactivity situation identifier” [Anderson, col. 7, lines 10-15 with Anderson, col. 8, lines 40-60].

Claim 19 can be mapped to Anderson as follows: “A method of determining credit card fraud point-of-compromise scores, [Anderson, col. 5, lines 24-38 with Anderson, col. 6, lines 10-30] the method comprising:

- correlating issued credit cards with authorized points-of-use such that transactions involving use of a credit card are retrievably; [Anderson, col. 6, lines 2-6 with Anderson, col. 9, lines 53-65]
- for a given set of compromised credit cards, [Anderson, col. 8, lines 45-60] extracting from said database all transactions involving use of each of said compromised credit cards; [Anderson, col. 8, lines 45-60 with Anderson, col. 9, lines 54-65]
- for each of said authorized points-of-use involved in at least one of said transactions involving at least one of said compromised credit cards, creating a tally of said transactions for each point-of-use, and incrementing each said tally for each occurrence of transaction involving at least one of said compromised credit cards; [Anderson, cols. 7-8, lines 49-38 with Anderson, col. 8, lines 45-60 with Anderson, col. 9, lines 13-27 with Anderson, col. 9, lines 55-65]

Art Unit: 2161

- sorting said authorized points-of-use according to the tallies; [Anderson, col. 8, lines 45-60] and
- assigning a score representative of point-of-compromise likelihood to each of said authorized points-of-use according to the respective tally” [Anderson, col. 6, lines 1-30 with Anderson, col. 5, lines 16-21 with Anderson, cols. 7-8, lines 49-38 with Anderson, col. 8, lines 45-60 with Anderson, col. 9, lines 13-27 with Anderson, col. 9, lines 54-65].

Anderson discloses the above limitations but does not explicitly teach:

- “logged in a database.”

With respect to Claim 19, Anderson, teaches:

- “logged in a database” [Anderson, col. 7, lines 7-15 with Anderson, col. 8, lines 35-38 with Anderson, cols. 9-10, lines 54-5].

Anderson discloses gathering data from FI's as files with fields and storing that data for further processing comprising databases, however Anderson does not explicitly disclose that the further processing is scoring the cards/tractions or events.

It would have been obvious to one of ordinary skill in the art at the time of invention to take the storage features from Anderson and install it into the invention of Anderson, thereby offering the obvious advantage of being able to quickly recall previously computed data (such as history data) of Anderson instead of re-computing data when it is desired.

Claim 20 can be mapped to Anderson as follows: “The method as set forth in claim 19 wherein said extracting is limited to a predetermined time period range of past transactions” [Anderson, col. 8, lines 45-60 with Anderson, col. 9, lines 54-65].

Claim 21 can be mapped to Anderson as follows: “The method as set forth in claim 19 wherein each said score is normalized via a characteristic related to point-of-use” [Anderson, col. 7, lines 2-14 with Anderson, col. 7, lines 25-31].

Claim 25 can be mapped to Anderson as follows: “The method as set forth in claim 20 wherein said predetermined time period range of past transactions is based upon a given suspected time-of-compromise window prior to a time-of-first-known-fraud for each said credit card” [Anderson, col. 9, lines 1-12 with Anderson, col. 6, lines 2-6 with Anderson, col. 5, lines 22-27 with Anderson, col. 5, lines 47-52].

Claim 29 can be mapped to Anderson as follows: “A computer memory [Anderson, col. 5, lines 21-27 with Anderson, col. 7, lines 16-19] comprising:

- computer code for wherein members of a first class are associated with members of a second class in accordance with each interaction of a member of the first class with a member of the second class; [Anderson, col. 6, lines 2-6 with Anderson, col. 9-10, lines 53-5 with Anderson, col. 7, lines 7-15 with Anderson, col. 8, lines 35-38]
- computer code for extracting from said database only those interactions for a predetermined past time period associated with a given subset of members of the first class wherein said given subset represents individual compromised

Art Unit: 2161

members of said first class; [Anderson, col. 8, lines 40-60 with Anderson, col. 9, lines 54-65] and

- computer code for assigning a score to individual members of the second class for each of said interactions extracted wherein said score represents a point-of-compromise probability for each of said individual members of the second class” [Anderson, col. 6, lines 1-30 with Anderson, col. 5, lines 16-21 with Anderson, cols. 7-8, lines 49-38 with Anderson, col. 8, lines 45-60 with Anderson, col. 9, lines 13-27 with Anderson, col. 9, lines 54-65].

Anderson discloses the above limitations but does not explicitly teach:

- “compiling a database”

With respect to Claim 29, Anderson, teaches:

- “compiling a database” [Anderson, col. 7, lines 7-15 with Anderson, col. 8, lines 35-38 with Anderson, cols. 9-10, lines 54-5].

Anderson discloses gathering data from FI's as files with fields and storing that data for further processing comprising databases, however Anderson does not explicitly disclose that the further processing is scoring the cards/tractions or events.

It would have been obvious to one of ordinary skill in the art at the time of invention to take the storage features from Anderson and install it into the invention of Anderson, thereby offering the obvious advantage of being able to quickly recall previously computed data (such as history data) of Anderson instead of re-computing data when it is desired.

Claims 4-7, 12, 14, 22, 23, 26, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,094,643 (Anderson et al.) in view of U.S. Patent No. 5,937,406 (Balabine et al.).

For **Claim 4**, Anderson teaches: “The method as set forth in claim 3 wherein said storing and said recording further comprises:

- characterized by a predetermined time frame bounding interactions” [Anderson, col. 5, lines 47-52 with Anderson, col. 6, lines 2-6].

Anderson discloses the above limitation but does not expressly teach:

- “dividing said database into a plurality of separately retrievable files, wherein each of said files is...between said first members and said second members.”

With respect to Claim 4, an analogous art, Balabine, teaches:

- “dividing said database into a plurality of separately retrievable files, wherein each of said files is...between said first members and said second members” [Balabine, col. 7, lines 5-9 with Balabine, col. 7, lines 12-20 with Balabine, col. 7, lines 29-31 with Balabine, col. 7, lines 50-56, with Balabine, col. 8, lines 23-26].

It would have been obvious to one of ordinary skill in the art at the time of invention to combine Balabine with Anderson because both inventions are directed towards using files and databases on computers with file systems.

Balabine’s invention would have been expected to successfully work well with Anderson’s invention because both inventions use databases. Anderson discloses a system for detecting counterfeit financial card fraud comprising a database of cards, transactions, and information, however Anderson does not expressly disclose that the

Art Unit: 2161

storage and recording of this database is divided into files based on a time frame.

Balabine discloses a file system interface to a database comprising BEM's that divide the database into files as specified by software implementation software library or customer specifications.

It would have been obvious to one of ordinary skill in the art at the time of invention to take the file system/database from Balabine and install it into the database system of Anderson, thereby offering the obvious advantage of automatically creating desired files from the database information so that files can be found fast and on arbitrarily complex queries.

Claim 5 can be mapped to Anderson (as modified by Balabine) as follows: "The method as set forth in claim 4 wherein for each of said third members, each said time-of-first-known-fraud and said predetermined past time frame are used to filter out those separately retrievable files not within said predetermined past time period from said selecting" [Anderson, col. 5, lines 16-21 with Anderson, col. 8, lines 45-60 with Anderson, col. 5, lines 22-27 with Anderson, col. 5, lines 47-52 with Anderson, col. 5, lines 47-52 with Anderson, col. 6, lines 2-6].

Claim 6 can be mapped to Anderson (as modified by Balabine) as follows: "The method as set forth in claim 4 wherein said separately retrievable files are created using identifier features of said second members suited to maximizing data compression" [Balabine, col. 7, lines 35-40 with Balabine, cols. 7-8, lines 55-2 with Balabine, Figs. 5A-5C with Balabine, col. 8, lines 23-26].

For **Claim 7**, Anderson teaches: “The method as set forth in claim 1, said storing further comprising.”

Anderson discloses the above limitation but does not expressly teach:

- “segregating correlated first members and second members into a plurality of data files wherein said files are identifiable via a predetermined common characteristic of at least one predetermined particular characteristic of a selected one of said first members and said second members.”

With respect to Claim 7, an analogous art, Balabine, teaches:

- “segregating correlated first members and second members into a plurality of data files wherein said files are identifiable via a predetermined common characteristic of at least one predetermined particular characteristic of a selected one of said first members and said second members” [Balabine, col. 7, lines 5-9 with Balabine, col. 7, lines 12-20 with Balabine, col. 7, lines 29-31 with Balabine, col. 8, lines 23-26 with Balabine, col. 7, lines 35-40 with Balabine, cols. 7-8, lines 50-2 with Balabine, Figs. 5A-5C].

It would have been obvious to one of ordinary skill in the art at the time of invention to combine Balabine with Anderson because both inventions are directed towards using files and databases on computers with file systems.

Balabine's invention would have been expected to successfully work well with Anderson's invention because both inventions use databases. Anderson discloses a system for detecting counterfeit financial card fraud comprising a database of cards, transactions, and information, however Anderson does not expressly disclose that the

Art Unit: 2161

storage and recording of this database is divided into files based on a time frame.

Balabine discloses a file system interface to a database comprising BEM's that divide the database into files as specified by software implementation software library or customer specifications.

It would have been obvious to one of ordinary skill in the art at the time of invention to take the file system/database from Balabine and install it into the database system of Anderson, thereby offering the obvious advantage of automatically creating desired files from the database information so that files can be found fast and on arbitrarily complex queries.

For **Claim 12**, Anderson teaches: "The method as set forth in claim 11 further comprising."

Anderson discloses the above limitation but does not expressly teach:

- "sorting said matrix into a plurality of data files such that in each of said files one of said first and second items has a predetermined unique characteristic;

With respect to Claim 12, an analogous art, Balabine, teaches:

- "sorting said matrix into a plurality of data files such that in each of said files one of said first and second items has a predetermined unique characteristic;

[Balabine, col. 6, lines 40-46 with Balabine, Figs. 5A-5C with Balabine, col. 7,

lines 5-9 with Balabine, col. 7, lines 12-20 with Balabine, col. 7, lines 29-31 with

Balabine, col. 7, lines 35-40 with Balabine, col. 7, lines 50-60]

It would have been obvious to one of ordinary skill in the art at the time of invention to combine Balabine with Anderson because both inventions are directed towards using files and databases on computers with file systems.

Balabine's invention would have been expected to successfully work well with Anderson's invention because both inventions use databases. Anderson discloses a system for detecting counterfeit financial card fraud comprising a database of cards, transactions, and information, however Anderson does not expressly disclose that the storage and recording of this database is divided into files based on a unique characteristic. Balabine discloses a file system interface to a database comprising BEM's that divide the database into files as specified by software implementation software library or customer specifications.

It would have been obvious to one of ordinary skill in the art at the time of invention to take the file system/database from Balabine and install it into the database system of Anderson, thereby offering the obvious advantage of automatically creating desired files from the database information so that files can be found fast and on arbitrarily complex queries.

Claim 14 can be mapped to Anderson (as modified by Balabine) as follows: "The method as set forth in claim 12 wherein each of said files is associated with a common structure or characteristic of at least one of said first and second items" [Balabine, col. 6, lines 40-46 with Balabine, Figs. 5A-5C with Balabine, col. 7, lines 5-9 with Balabine, col. 7, lines 12-20 with Balabine, col. 7, lines 29-31 with Balabine, col. 7, lines 35-40 with Balabine, col. 7, lines 50-60].

For **Claim 22**, Anderson teaches: “The method as set forth in claim 19...is characterized by a given time frame bounding said transactions logged” [Anderson, col. 5, lines 47-52 with Anderson, col. 6, lines 2-6].

Anderson discloses the above limitation but does not expressly teach: “...wherein said database comprises a plurality of files wherein each of said files.”

With respect to Claim 22, an analogous art, Balabine, teaches: “...wherein said database comprises a plurality of files wherein each of said files” [Balabine, col. 7, lines 5-9 with Balabine, col. 7, lines 12-20 with Balabine, col. 7, lines 29-31 with Balabine, col. 7, lines 50-56, with Balabine, col. 8, lines 23-26].

It would have been obvious to one of ordinary skill in the art at the time of invention to combine Balabine with Anderson because both inventions are directed towards using files and databases on computers with file systems.

Balabine's invention would have been expected to successfully work well with Anderson's invention because both inventions use databases. Anderson discloses a system for detecting counterfeit financial card fraud comprising a database of cards, transactions, and information, however Anderson does not expressly disclose that the storage and recording of this database is divided into files based on a time frame. Balabine discloses a file system interface to a database comprising BEM's that divide the database into files as specified by software implementation software library or customer specifications.

It would have been obvious to one of ordinary skill in the art at the time of invention to take the file system/database from Balabine and install it into the database system

of Anderson, thereby offering the obvious advantage of automatically creating desired files from the database information so that files can be found fast and on arbitrarily complex queries.

Claim 23 can be mapped to Anderson (as modified by Balabine) as follows: “The method as set forth in claim 22 wherein each of said plurality of files is sortable by identifier data representative of subsets of credit card numbers” [Balabine, col. 7, lines 5-9 with Balabine, col. 7, lines 12-20 with Balabine, col. 7, lines 29-31 with Balabine, col. 7, lines 50-56, with Balabine, col. 8, lines 23-26 with Balabine, Figs. 5A-5C].

Claim 26 can be mapped to Anderson (as modified by Balabine) as follows: “The method as set forth in claim 22 wherein said files comprise a matrix [Balabine, Figs. 5A-5C with Balabine, col. 7, lines 56-66] of data compressed identifier pairs wherein each of said pairs includes a credit card identifier [Anderson, col. 8, lines 35-38] and a point-of-use situation identifier” [Anderson, col. 7, lines 10-15 with Anderson, col. 8, lines 40-60].

Claim 27 can be mapped to Anderson (as modified by Balabine) as follows: “The method as set forth in claim 26 further comprising providing a first database comprising a relational data pair relating said point-of-use situation identifier and said credit card identifier, [Anderson, col. 7, lines 10-15] and a second database correlating each said point-of-use situation identifier to a physical said point-of-use” [Anderson, col. 7, lines 21-31].

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,094,643 (Anderson et al.) in view of U.S. Patent No. 5,421,008 (Banning et al.).

Claim 28 can be mapped to Anderson as follows: “A method of doing business comprising:

- receiving a set of credit card numbers and a set of merchants authorized to accept said credit cards; [Anderson, col. 5, lines 16-21 with Anderson, col. 5, lines 45-53 with Anderson, col. 7, lines 10-14 with Anderson, col. 7, lines 25-31 with Anderson, col. 8, lines 35-38]
- for a given set of compromised credit card numbers, extracting each related said data point of said matrix; [Anderson, col. 8, lines 45-60 with Anderson, col. 8, lines 45-60 with Anderson, col. 9, lines 54-65]
- incrementing a tally for each merchant associated with each related said data point; [Anderson, cols. 7-8, lines 49-38 with Anderson, col. 8, lines 45-60 with Anderson, col. 9, lines 13-27 with Anderson, col. 9, lines 55-65] and

Anderson discloses the above limitations but does not explicitly teach:

- “forming a matrix of said numbers and said merchants
- logging each use of a card with a merchant as a predetermined data point of said matrix
- sorting said merchants according to the tallies.”

With respect to Claim 28, Anderson, teaches:

Art Unit: 2161

- “forming a matrix of said numbers and said merchants” [Anderson, col. 7, lines 7-15 with Anderson, col. 8, lines 35-38 with Anderson, cols. 9-10, lines 54-5 with Anderson, col. 8, lines 45-60]
- logging each use of a card with a merchant as a predetermined data point of said matrix” [Anderson, col. 7, lines 7-15 with Anderson, col. 8, lines 35-38 with Anderson, cols. 9-10, lines 54-5].

With respect to Claim 28, Banning, teaches:

- sorting said merchants according to the tallies. [Banning, col. 9, lines 1-6].

Anderson discloses gathering data from FI's as files with fields and storing that data for further processing comprising databases (a matrix), however Anderson does not explicitly disclose that the further processing is scoring the cards/tractions or events.

It would have been obvious to one of ordinary skill in the art at the time of invention to take the storage features from Anderson and install it into the invention of Anderson, thereby offering the obvious advantage of being able to quickly recall previously computed data (such as history data) of Anderson instead of re-computing data when it is desired.

It would have been obvious to one of ordinary skill in the art at the time of invention having the teachings of Banning and Anderson before him/her to combine Banning with Anderson because both inventions are directed towards obtaining information.

Banning's invention would have been expected to successfully work well with Anderson's invention because both inventions use databases. Anderson discloses a

Art Unit: 2161

system for detecting counterfeit financial card fraud comprising categorized scored transactions. However, Anderson does not expressly disclose sorting merchants according to tallies. Banning discloses a system for interactive graphical construction of a data base query and storing of the query object links as an object comprising (title) sorting information on any type of information.

It would have been obvious to one of ordinary skill in the art at the time of invention having the teachings of Banning and Anderson before him/her to take the sorting from Banning and install it into the invention of Anderson, thereby offering the obvious advantage of the view showing information in the desired order for the user of Anderson.

Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,094,643 (Anderson et al.) in view of U.S. Patent No. 5,937,406 (Balabine et al.), further in view of U.S. Patent No. 5,404,507 (Bohm et al.).

For **Claim 30**, Anderson teaches: “of interactivity events between items-of-use, each having a unique first identifier, [Anderson, col. 8, lines 35-38] and points-of-use, each having a unique second identifier, [Anderson, col. 8, lines 49-67] and a set of compromised said items-of-use, [Anderson, col. 5, lines 24-27], each of said files covering a given time frame for said interactivity events, [Anderson, col. 5, lines 47-52 with Anderson, col. 6, lines 2-6] a method for point-of-compromise scoring [Anderson, col. 5, lines 24-38 with Anderson, col. 6, lines 10-30] comprising:

Art Unit: 2161

- determining a time-of-first-known-fraud for each said compromised said items-of-use; [Anderson, col. 5, lines 22-27 with Anderson, col. 5, lines 47-52]
- for each said compromised said items-of-use, assigning a suspected date window prior to said time-of-first-known-fraud; [Anderson, col. 9, lines 1-12 with Anderson, col. 6, lines 2-6 with Anderson, col. 5, lines 22-27 with Anderson, col. 5, lines 47-52]
- selecting those ones of said files included in said suspected date window wherein said compromised said items-of-use are included in said files; [Anderson, col. 8, lines 45-60 with Anderson, col. 5, lines 16-21]
- for each selected file and for each compromised said items-of-use, counting the number of said interactivity events for each of said points-of-use in each said selected file” [Anderson, cols. 7-8, lines 49-38 with Anderson, col. 8, lines 45-60 with Anderson, col. 9, lines 13-27 with Anderson, col. 9, lines 55-65].

Anderson discloses the above limitations but does not expressly teach:

- “Given a computerized matrix
- wherein said matrix further comprises a plurality of files.”

With respect to Claim 30, Anderson, teaches:

- “Given a computerized matrix” [Anderson, col. 7, lines 7-15 with Anderson, col. 8, lines 35-38 with Anderson, cols. 9-10, lines 54-5].

With respect to Claim 30, an analogous art, Balabine, teaches:

- “wherein said matrix further comprises a plurality of files” [Balabine, col. 6, lines 40-46 with Balabine, Figs. 5A-5C with Balabine, col. 7, lines 5-9 with Balabine,

Art Unit: 2161

col. 7, lines 12-20 with Balabine, col. 7, lines 29-31 with Balabine, col. 7, lines 35-40 with Balabine, col. 7, lines 50-60].

With respect to Claim 30, an analogous art, Bohm, teaches:

- “assigning the highest score indicative of point-of-compromise to a highest scoring one of said points-of-use” [Anderson, col. 6, lines 1-30 with Anderson, col. 5, lines 16-21 with Anderson, cols. 7-8, lines 49-38 with Anderson, col. 8, lines 45-60 with Anderson, col. 9, lines 13-27 with Anderson, col. 9, lines 54-65 with Bohm, col. 8, lines 1-5].

It would have been obvious to one of ordinary skill in the art at the time of invention to combine Balabine and Bohm with Anderson because the inventions are directed towards using files and databases on computers with file systems.

Balabine's and Bohm's inventions would have been expected to successfully work well with Anderson's invention because the inventions use databases. Anderson discloses a system for detecting counterfeit financial card fraud comprising a database of cards, transactions, and information, however Anderson does not expressly disclose that the storage and recording of this database is divided into files based on a time frame or assigning highest scores. Balabine discloses a file system interface to a database comprising BEM's that divide the database into files as specified by software implementation software library or customer specifications. Bohm discloses an apparatus and method for finding records in a database by formulating a query using equivalent terms which correspond to terms in the input query comprising highest valued candidates.

It would have been obvious to one of ordinary skill in the art at the time of invention to take the file system/database from Balabine and the highest values (scores) of Bohm and install it into the database system of Anderson, thereby offering the obvious advantage of automatically creating desired files from the database information so that files can be found fast and on arbitrarily complex queries, and obtaining the highest possible point-of-compromise given the scores for the time being examined.

Anderson discloses gathering data from FI's as files with fields and storing that data for further processing comprising databases (a matrix), however Anderson does not explicitly disclose that the further processing is scoring the cards/tractions or events. It would have been obvious to one of ordinary skill in the art at the time of invention to take the storage features from Anderson and install it into the invention of Anderson, thereby offering the obvious advantage of being able to quickly recall previously computed data (such as history data) of Anderson instead of re-computing data when it is desired.

(10) Response to Arguments

As to the appellant's arguments with respect to Claim 19 for the prior art(s) allegedly not teaching "[credit cards with] authorized point-of-use," the examiner respectfully disagrees. As cited, Anderson, col. 6, lines 2-6 with Anderson, col. 9, lines 53-65 teach this limitation. Specifically, Anderson, col. 6, lines 2-6 teaches that transactions are done on cards (either credit or debit as seen from Anderson, col. 1, lines 23-25 stating debit and credit cards and Anderson, Fig. 1 having information

Art Unit: 2161

regarding credit and debit cards). Transactions on either credit cards or debit cards must be authorized either by signature, ID, or PIN (depending on card type and if the back of a credit card is signed (Anderson, Fig. 1)). Every time the card is used successfully (and hence authorized), this is an authorized point-of-use as seen from the literal definition of the words. Essentially, transactions are authorized points-of-use.

As to the appellant's arguments with respect to Claim 19 for the prior art(s) allegedly not teaching "creation of tallies for authorized points-of-use," the examiner respectfully disagrees. As seen above, "authorized point-of-use" has been met above. Anderson, cols. 7-8, lines 49-38 with Anderson, col. 8, lines 45-60 with Anderson, col. 9, lines 13-27 with Anderson, col. 9, lines 55-65 teaches this limitation. Specifically, Anderson, col. 8, lines 15-20 contains a total number of successful transactions in stating:

"14 Number of days card appears in the POS 5-day table 15
Total number of successful transactions in the history table
16 Total number of successful transactions for > \$200 in the
POS 5-day table."

This total number of successful transactions is a tally of transactions for each point-of-use. Additionally, since this is a deduced total from looking at historical information, it must be incremented for each occurrence of transactions that happen to involve at least one of the compromised credit cards (counts the transactions when it deduces the total).

As to the appellant's arguments with respect to Claim 19 for the prior art(s) allegedly not teaching "sorting of authorized points-of-use according to tallies," the

Art Unit: 2161

examiner respectfully disagrees. Anderson, col. 8, lines 45-60 was used to reject this limitation. Anderson, col. 8, lines 45-60 teaches (important parts underlines):

“This can be done by zip code, block code, or any other geographic identifier. The events are then analyzed and scored based on individual card and transaction scored from above [see Table 1] as well as based on other transactions in the event. In block 24, regions are selected via the zip codes or other international geographic identifier for the transactions to be analyzed for a particular day. Any day may be selected and reprocessed at a later point if desired. At block 26, the transactions for the selected day and the selected region are processed to generate events based on discrete time intervals. The default event will comprise transactions in the same geographic region during a sixty minute period. Workflow tables are updated with processing steps and status. The transactions selected for events are then passed to the event scoring block 28 from the acquirer's view.”

This citing teaches that events are made based on a number of transactions (since a number of transactions make up events (Anderson, col. 8, lines 42-44)) in a region during a time period (e.g. 60 minutes). Events are then scored according to card/transaction scoring in Anderson, table 1, which includes Anderson, col. 8, lines 15-20 (“15 Total number of successful transactions in the history table.” This teaching is further established by a similar teaching of Anderson, col. 9, line 26 teaching another scoring parameter for events with “Number of cards_ with uses>=_.” Here, scoring events is based on a number of cards over some threshold number of uses. As such, in doing the event scoring, it must know a tally for the number of times each card was used in that event (and the number of cards over that threshold tally). The event scoring thus must sort/sift through the transactions in the event in order to determine the

Art Unit: 2161

number(s) mentioned above (sorting according to tallies) for use in scoring the event in Anderson.

As to the appellant's arguments with respect to Claim 19 for the prior art(s) allegedly not teaching "assigning of scores to the authorized points-of-use," the examiner respectfully disagrees. Anderson, col. 6, lines 1-30 with Anderson, col. 5, lines 16-21 with Anderson, cols. 7-8, lines 49-38 with Anderson, col. 8, lines 45-60 with Anderson, col. 9, lines 13-27 with Anderson, col. 9, lines 54-65 was used in rejecting this limitation. Since transactions are authorized points of use (see above response to arguments), Anderson needs to show a teaching where transactions are scored to overcome this argument. Specifically, Anderson, cols. 7-8, lines 49-38, teaches that transactions are scored with "The scoring process "scores" all cards and transactions" (Anderson, col. 7, line 50). The reminder of column 7 and most of column 8 teach some of the scoring parameters associated with scoring cards and transactions. As for appellant's continued arguments regarding Claim 28 for Anderson failing to disclose "sorting merchants according to tallies," the examiner agrees, however, Banning was used in Claim 28 for rejecting this limitation. This argument will be addressed further below in the examiner's response regarding Claim 28.

As to the appellant's arguments with respect to Claim 19 for the prior art(s) allegedly not teaching "assigning a score representative of point-of-compromise likelihood to each of said authorized points-of-use according to the respective tally," the examiner respectfully disagrees. As shown above, Anderson does assign scores to points-of-use/transactions. Anderson, col. 8, lines 15-20 (at least "15 Total number of

Art Unit: 2161

successful transactions in the history table”) identifies that the score assigned is based on the number of successful transactions (tally). This score is representative of the likelihood of a point-of-compromise since the scores are used to determine suspicious activity on the card (Anderson, col. 6, lines 52-57). Suspicious activity on the card is for identifying if there is a point of compromise/fraud (“POC’s” Anderson, col. 9, lines 54-65 which refers to Anderson, col. 8, lines 35-38 with “today’s work”/events/transactions/cards and, separately, Anderson, col. 5, lines 33-35, and Anderson, col. 5, lines 16-21).

As to the appellant’s arguments with respect to Claim 1 for the prior art(s) allegedly not teaching that the scores in Anderson do not suggest the interaction factors, the examiner respectfully disagrees. The examiner notes that the claimed “interaction factors” and their use in the claim appears to be nothing more than the tallies from Claim 19. Since the number of times a card was used is a factor (in scoring, for instance, see above) and using the card is a user interacting with a financial institution, the claimed “interaction factors” are tallies for the number of times the card was used. Particular attention should be brought to Anderson, col. 8, lines 15-20 for Anderson identifying card tallies. With this equivalence being drawn, arguments from Claim 19 can be used in response to the arguments regarding Claim 1.

As to the appellant’s arguments with respect to Claim 11 for the prior art(s) allegedly not teaching “assigning a point-of-compromise score to each of said second items that are involved in the extracted interactivities, where each said score is indicative of frequency of the extracted interactivities occurring at the corresponding

Art Unit: 2161

second item,” the examiner respectfully disagrees. Anderson, col. 6, lines 1-30 with Anderson, col. 5, lines 16-21 with Anderson, cols. 7-8, lines 49-38 with Anderson, col. 8, lines 45-60 with Anderson, col. 9, lines 13-27 with Anderson, col. 9, lines 54-65 were used in the rejection regarding these limitations. As mapped in the above limitations not argued here, the “first items” correspond to all of Anderson’s data (incoming cards/transactions) from FI’s and historical data, while the claimed “second items” are a subset of all of Anderson’s data where the subset is suspicious cards or transactions (possible POC’s) in Anderson. As discussed above, Anderson assigns scores to cards, transactions, and events. These scores are used in analysis to determine points-of-compromise (“POC’s” Anderson, col. 9, lines 54-65). Toward the bottom of Anderson, col. 6, lines 1-30 teaches that the card, transactions, and events are scored and used “to again determine the point of compromise.” These cards, transactions, and events are then used as a basis for fraudulent activities, but “as new fraud pattern are detected, this information can be used to modify and refine the various scoring criteria” (used to determine the point of compromise). Also, as stated above, scoring is based on frequency of the use (extracted interactivities) of the card/number of transactions. Scoring based on use and card is the score being indicative to the frequency of extracted interactivities occurring at the corresponding second item.

Appellant’s argument regarding “scoring events, which are groups of transactions, clearly is different from assigning scores to potential points-of-compromise, as recited in claim 11” is merely a statement that gives no reasoning as to

Art Unit: 2161

how it is clearly different. As such, it appears that the response above has responded to this argument.

As to the appellant's arguments with respect to Claim 29 for the prior art(s) allegedly not teaching "the scoring parameters clearly do not represent a point-of-compromise probability for each of the individual members of the second class" the examiner respectfully disagrees. Anderson, col. 6, lines 1-30 with Anderson, col. 5, lines 16-21 with Anderson, cols. 7-8, lines 49-38 with Anderson, col. 8, lines 45-60 with Anderson, col. 9, lines 13-27 with Anderson, col. 9, lines 54-65 were used in the rejection regarding these limitations. This argument is similar to Claim 11's argument met above. However, it should be noted that the scores in Anderson are also used to weight (as shown in Anderson, cols. 7-8, lines 49-38). The weights along with the score are indicative of fraudulent behavior (since Anderson's invention is trying to find fraudulent behavior (as indicated in Anderson, col. 3, lines 15-30 with Anderson, col. 4, lines 2-3, and Anderson's title)). Anderson, col. 6, lines 55-57 also teaches that high scores alone indicate highly suspicious [probable fraudulent activity, such as POC's [Anderson, col. 9, lines 54-65]] activity with "the highest scoring transactions (most suspicious) are requested." At the very least, these scores represent a point-of-compromise probability.

As to the appellant's argument with respect to Claim 29 for the prior art(s) allegedly not teaching "the computer code for assigning a score," the examiner submits that this argument was met above at least with respect to Claim 11.

As to the appellant's arguments with respect to Claim 28 for the prior art(s) allegedly not teaching scoring parameters are tallies for merchants, the examiner respectfully disagrees. Anderson, col. 8, lines 10-13 teaches a tally for each merchant in that the scoring parameters include "more than 1 successful transaction at the same terminal ID." Anderson explicitly teaches "at the same terminal ID." The same terminal ID represents the same location. Transactions happen at a merchant (bank, ATM, electronics stores, etc), so transactions occurring at the same terminal ID are transactions occurring at the same merchant. In order for the computer to know that there is more than 1 successful transaction at the same terminal ID (and hence merchant), a count of successful transactions at that terminal ID must exist. Therefore, the scoring parameters of Anderson, col. 8, lines 10-13 are tallies for merchants. The tally/count of successful transaction at the same terminal ID is used to score cards/transactions/events of Anderson.

As to the appellant's arguments with respect to Claim 28 for the prior art(s) allegedly not teaching "incrementing a tally for each merchant associated with each related said data point [point-of-use/transaction]," the examiner respectfully disagrees. Anderson, col. 8, lines 10-13 teach a tally for each merchant as discussed above. Since a count is in place to determine if more than 1 successful transaction at the same terminal ID occurred, this means that incrementing occurs. Even if it is incrementing 0 to 1 (and even bit values for true or false), this is still incrementing.

As to the appellant's arguments with respect to Claim 28 for the prior art(s) allegedly not teaching "sorting the merchants according to the tallies [mentioned in

Art Unit: 2161

Appellant's appeal brief p. 9 and 15],” the examiner respectfully disagrees. As cited, Banning, col. 9, lines 1-6 (with Anderson's citations for the previously claimed tallies above) teach this limitation. In the cited section Banning teaches:

“OrderBy 350 keeps the ordered list of (O_ColumnName, OrderOp) where OrderOp defines either an ASC (ascending) or DSC (descending) order of list and O_ColumnName is the column name specified in the Order By clause.”

Here, Banning teaches the OrderBy clause that can be incorporated into a query to order the results of the query in either ascending or descending order (as desired). When Banning is combined in Anderson's analysis tool of Anderson, col. 9, lines 53-65, the users of Anderson can view information in the desired order. Ordering results helps in analysis and will also provide an ergonomic, natural interface for a database user (Banning, abstract (bottom)). The events being reviewed by the analysis tool of Anderson, are a subset of transactions/cards obtained based on conditions (e.g. region and time intervals, Anderson, col. 8, lines 45-60). In order to obtain this subset of all transactions, the system must be queried to find those transactions/cards matching the conditions. The combination of Anderson with Banning must be considered when observing that sorting merchants according to tallies is obvious.

In response to appellant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in

Art Unit: 2161

the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, suggestion/motivation to combine the references can be seen in both the prior art and in knowledge generally available to one of ordinary skill in the art. As cited above, when Banning is combined in Anderson's analysis tool of Anderson, col. 9, lines 53-65, the users of Anderson can view information in the desired order (knowledge generally available to one of ordinary skill in the art). Ordering results helps in analysis (knowledge generally available to one of ordinary skill in the art) and will also provide an ergonomic, natural interface for a database user (Banning, abstract (bottom)(suggestion/motivation from prior art)).

As to the appellant's arguments with respect to Claims 17 and 18 for the prior art(s) allegedly not teaching "incrementing a corresponding second member tally in response to each said individual transaction," the examiner respectfully disagrees. The examiner respectfully submits that the Appellant's claims and specification do not limit "members" as not being cards, transactions, or events. In fact, the specification only mentions "member" once in the "Technical Field" section, page 1. The mentioning in the specification also is not at all definitional. Also, the "second members" appear to claim exactly like Claim 11's "second items." As such, the responses regarding Claim 11's arguments can be incorporated into these responses for Claims 17 and 18. The "second members" are defined in the claim though as each being a potential point-of-compromise. A potential point-of-compromise refers to a point in the transactions regarding a card where possible fraudulent transactions begun (e.g. Anderson, col. 5,

Art Unit: 2161

lines 33-37). As discussed above, Anderson increments a count regarding the number of time the card was used in Anderson, col. 8, lines 15-20 teaching a total number of successful transactions. This total count (used in scoring cards/transactions/events) is a tally of the number of successful transactions.

As to the appellant's arguments with respect to Claims 4 and 22 for the prior art(s) allegedly not teaching "dividing said database into a plurality of separately retrievable files, wherein each of said files is...[Anderson teaching this removed part ("characterized by a predetermined time frame bounding interactions")] between said first members and said second members," the examiner respectfully disagrees.

Balabine, col. 7, lines 5-9 with Balabine, col. 7, lines 12-20 with Balabine, col. 7, lines 29-31 with Balabine, col. 7, lines 50-56, with Balabine, col. 8, lines 23-26 was used in rejecting this limitation. Balabine, in summary, teaches a database and BEM module(s) where the BEM module(s) define a way in which the data in the database should be mapped to files with in a file system (Balabine, col. 7, lines 5-8) (like Windows Explorer from the drawings of Balabine). When the user accesses the area in the file system handled by the BEM module(s), the files come from the database, and thus the database of Balabine is divided into a plurality of separately retrievable files. Balabine teaches this best in an mapping example where a table of customers including names, addresses and IDs is presenting in the x:\customer directory, where it's component subdirectories (name, address, id) and the files contained therein (Adams.txt, Andrews.txt. Brewster.txt, etc).are displayed within the x:\customer directory (Balabine, cols. 7-8, lines 58-2). In the same citation, Balabine also teaches that the example files

Art Unit: 2161

can be opened, which is the claimed subject matter of “separately retrievable.” As for the “characterized by a predetermined time frame bounding interactions” limitation not explicitly argued, Anderson teaches this in the cited sections of Anderson, col. 5, lines 47-52 with Anderson, col. 6, lines 2-6. Here Anderson teaches that activity for a particular time period is gathered and analyzed. Gathering and analyzing on a particular time period is a predetermined time frame bounding interactions/activity, and, since the first and second member are being collected and determined here, especially the second members (being potential points of compromise), this indicates a time frame between said first members and said second members (therefore, the files created from Balabine are also between said first and second members). To aid in understanding, the claimed first members are incoming data from financial institutions (this data indicates members that may be compromised), and the second members, may be potential points of compromise since the system scores the transactions and analyzes the data to see if the scores are high enough to justify certain transactions as being highly suspicious (Anderson, col. 6, lines 55-58).

As to the appellant’s arguments with respect to Claim 7 for the prior art(s) allegedly not teaching “segregating correlated first members and second members into a plurality of data files wherein said files are identifiable via a predetermined common characteristic of at least one predetermined particular characteristic of a selected one of said first members and said second members,” the examiner respectfully disagrees. Balabine, col. 7, lines 5-9 with Balabine, col. 7, lines 12-20 with Balabine, col. 7, lines 29-31 with Balabine, col. 8, lines 23-26 with Balabine, col. 7, lines 35-40 with Balabine,

Art Unit: 2161

cols. 7-8, lines 50-2 with Balabine, Figs. 5A-5C was used in rejecting this limitation. In summary as also mentioned above, Balabine teaches a database and BEM module(s) where the BEM module(s) define a way in which the data in the database should be mapped to files with in a file system (Balabine, col. 7, lines 5-8) (like Windows Explorer from the drawings of Balabine). The combination of Anderson with Balabine must be carefully considered in identifying that this limitation is obvious in view of Anderson with Balabine. Anderson teaches databases of information (e.g. Anderson, Fig. 1), while Balabine essentially teaches showing a database as a plurality of files (segregated/divided according to the BEM module(s)). The history databases of Anderson store the incoming transactions from financial institutions (since transactions are history, and the databases are labeled as history databases in Fig. 1) while the fraud database 104 stores known fraudulent transactions (Anderson, col. 5, lines 25-27). Here, the claimed members still refer to transactions using cards. The transactions in Anderson include as least region, time, and obviously the card involved since events (groups of transactions using cards) are created based on this criteria (Anderson, col. 8, lines 45-60) (although Anderson does teach additional included fields for transactions in Anderson, col. 7, lines 10-14). Events in Anderson, are then stored so that the event criteria does not have to be recreated each time more data/transactions come in and adds to the events (Anderson, col. 9, lines 1-5 since the event criteria doesn't have to be started over again when new/old transactions arrive, with Anderson stating "This allows transactions to be processed on a particular date without having to start over again when additional files for the date arrive"). Starting

Art Unit: 2161

over again requires parameters (e.g. region and time period) to be set for defining an event as seen in Anderson, col. 8, lines 45-60. In doing POC (point-of-compromise) analysis using events in Anderson, col. 9, lines 53-65, point of compromise/fraudulent transactions will be identified, and thus, stored in the fraudulent database of known fraudulent transactions. Since these fraudulent transactions were identified using events correlating transactions according to at least one predetermined particular characteristic of a selected first and second member/transaction (e.g. date, region, etc.), when viewing the segregated files of the fraud database in Balabine, the files will be identifiable by a predetermined common characteristic of the member/transaction according to any mapping to the transaction/member attributes in any BEM module(s) as specified by the BEM mapping creator so that files can be found fast and on arbitrarily complex queries (Balabine, col. 4, lines 52-55, the suggestion/motivation for combining the references).

As to the appellant's arguments with respect to Claim 30 for the prior art(s) allegedly not teaching "counting the number of the interactivity events for each of the points-of-use in the selected file," the examiner respectfully disagrees. The appellant has only alleged that the examiner has given a defective reading of the claim element. As such, the examiner can only explain how Anderson teaches the element as cited. Anderson, cols. 7-8, lines 49-38 with Anderson, col. 8, lines 45-60 with Anderson, col. 9, lines 13-27 with Anderson, col. 9, lines 55-65 were used in the rejection regarding these limitations. Again, as stated above, specific attention should be brought to Anderson, col. 8, lines 10-15 where it describes "more than 1 successful transaction (interactivity

Art Unit: 2161

events) at the same terminal ID" (point-of-use). In order to determine that there is more than 1 successful transaction/interactivity event at the same terminal ID/point-of-use, a count must be made.

The other claims argued merely because of a dependency on a previously argued claim(s) in the appeal brief presented to the examiner, filed March 5th, 2007, are moot in view of the examiner's interpretation of the claims and art and are still considered rejected based on their respective rejections.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Brent Stace

Conferees:

/Apu M Mofiz/

Supervisory Patent Examiner, Art Unit 2161

/Eddie C. Lee/

Quality Assurance Specialist, TC 2100